

2-22-88

TO: Bill Lewis, T-3-3

FROM: John Kemmerer, T-44, X-7112

SUBJECT: Background Info on Waste Disposal, Inc Site in
Santa Fe Springs, CA

- 1) Site Maps - The Dames and Moore Map (Figure 1) does not accurately show the site boundaries. The second, assessor's map shows the outline of the site. The southern part of the Campbell property has been found to be contaminated and will be part of the RI/FS.
- 2) Dames and Moore 12/7/84 Study of Waste Disposal, Inc Site
- 3) Dames and Moore 5/20/86 Study of Campbell Property
- 4) John L. Hunter 1/15/88 Study of Spill Sites on Campbell Property.

On the assessor's map I've indicated the three problem areas:

- a) - Drums on Campbell property
- b) - Lack of fence on Campbell property
- c) - Insecure fence adjacent to school

If you want more detail, let me know

cc (urnow (w/t attachment)

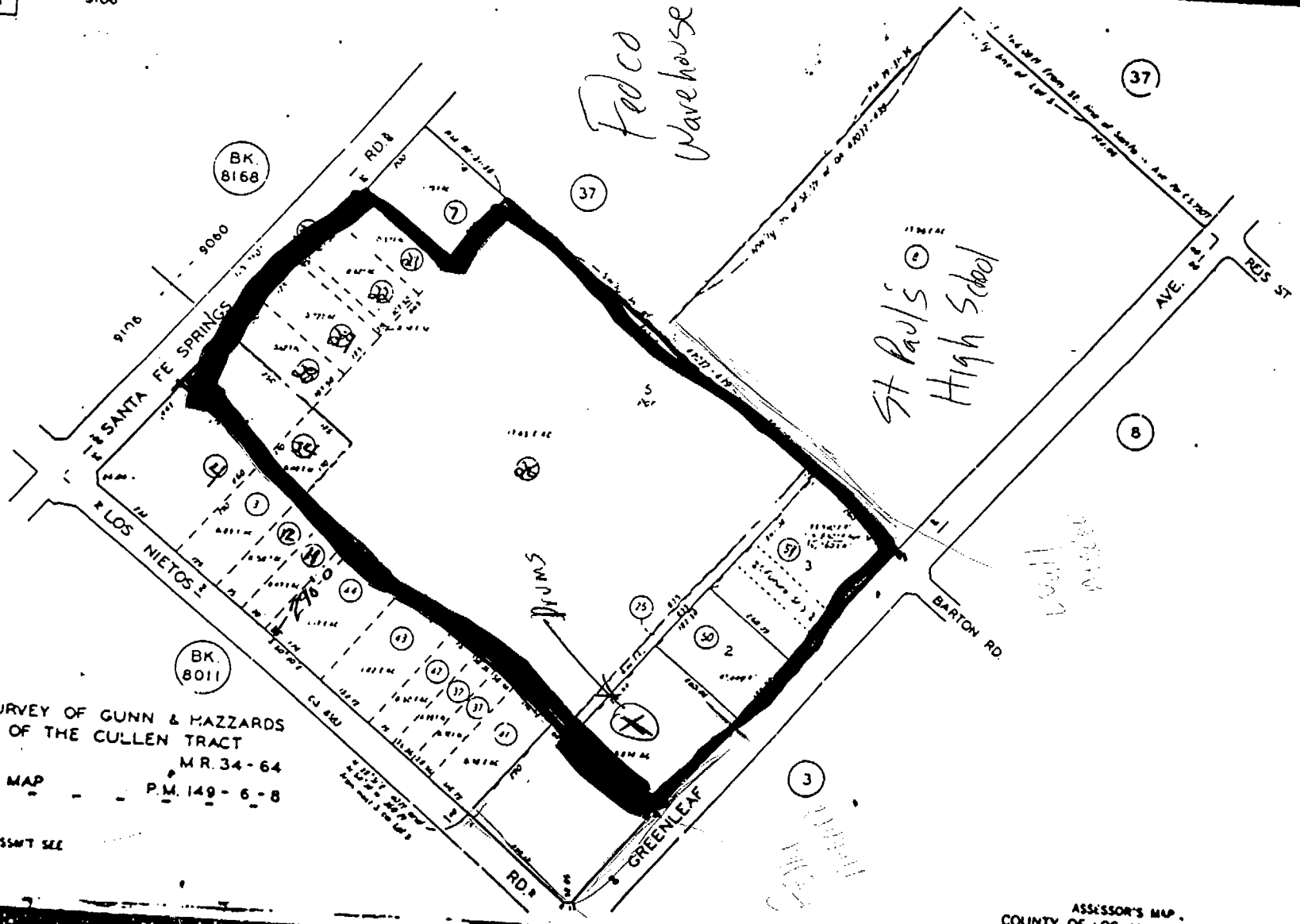
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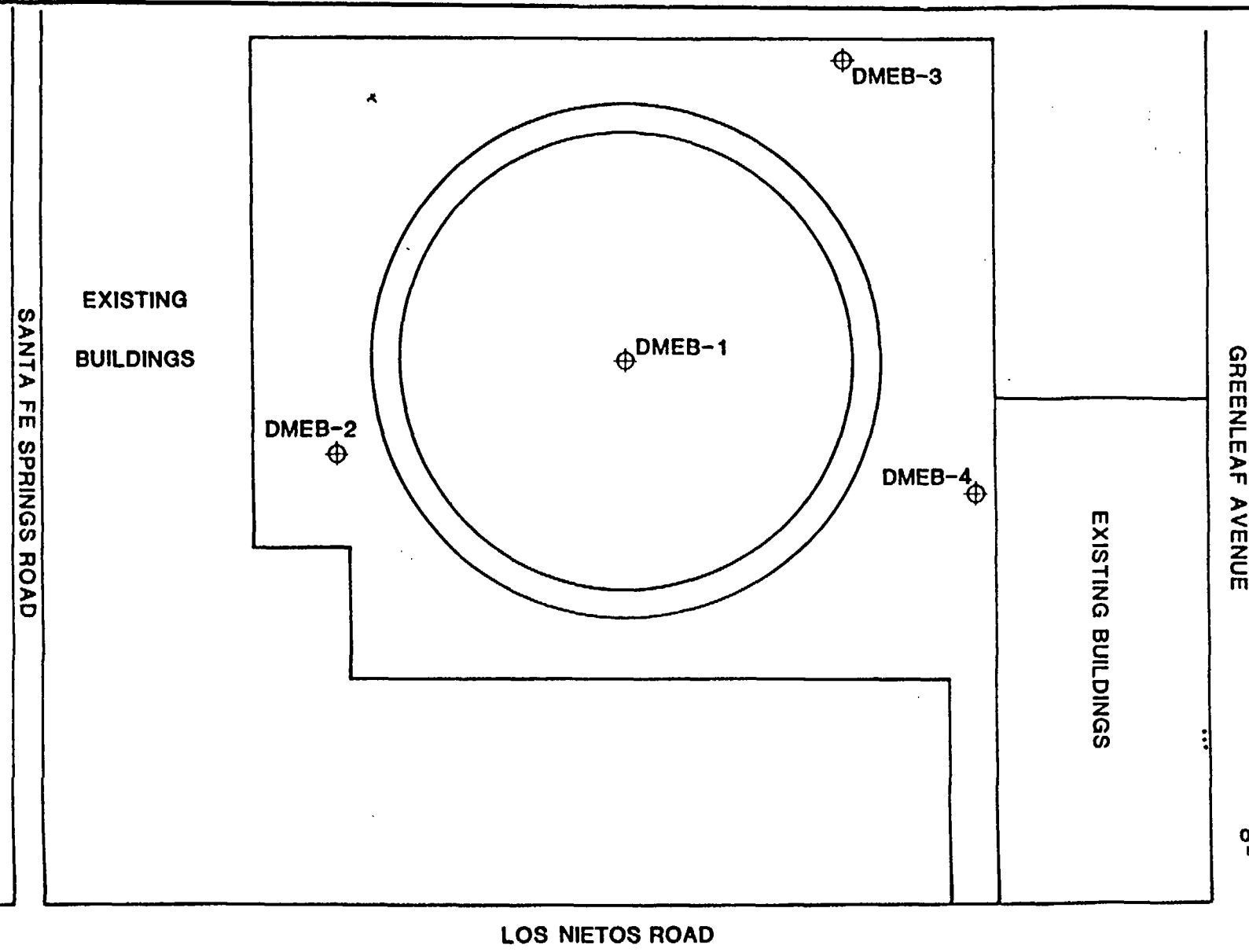
A RESURVEY OF GUNN & HAZZARDS
PLAT OF THE CULLEN TRACT
MR. 34-64
PARCEL MAP P.M. 149-6-8

SEE ASSMT SEE



ASSESSOR'S MAP
COUNTY OF LOS ANGELES, CALIF.

(2) 10/7/84



EXPLANATION:
⊕ DAMES & MOORE
ENVIRONMENTAL BORING

BORING LOCATION MAP

4.0 INVESTIGATIVE RESULTS

4.1 DRILLING AND SAMPLING PROGRAM

Detailed logs of the materials encountered in the four borings are presented in Figures 2 and 3. Also shown on the logs are the measured concentrations of organic vapors emitted from each sample. A brief narrative description of the materials encountered in each boring follows.

Boring DMEB-1 - This boring, located roughly in the center of the former disposal reservoir (Figure 1), encountered 2 to 3 feet of fill soil underlain by a thin layer of concrete. Soil intermixed with waste material, consisting of a black oily and/or tarry substance, was encountered from approximately 3 to 5 feet and from about 10 feet to the bottom of the boring at 22 feet (Figure 2). Below about 20 feet, the waste material graded to a soft, black viscous liquid. The boring was terminated at the top of a layer of concrete at 22.5 feet which may represent the base of the concrete-lined reservoir.

Boring DMEB-2 - Boring DMEB-2 was located to the northwest of the main reservoir (Figure 1). Soil mixed with waste material similar to that found in Boring DMEB-1 was encountered between depths of 3.5 to 14 feet (Figure 2). These materials are overlain by a layer of concrete above which is about 3 feet of fill soil. The boring was terminated at a depth of about 19 feet in dense clayey soils.

Boring DMEB-3 - Boring DMEB-3, located near the northeastern boundary of the site, encountered loose sandy fill material (silty sand as well as asphalt and metal debris) down to a total depth of about 9 feet (Figure 3). Soils penetrated below this depth consisted of silty clay to clayey silt and, below 21 feet, clean fine- to medium-grained sand. No visible waste materials were encountered; however a slight odor was detected in sample 10 (11 feet) which was collected below the base of the surficial fill materials.

Boring DMEB-4 - Boring DMEB-4, located southeast of the perimeter of the reservoir (Figure 1), encountered a 2- to 3-foot-thick layer of black oily silty clay beneath approximately four feet of fill soil (Figure 3). From a depth of about 7 feet down to the bottom of the boring at 20 feet, the soils encountered consisted of silty clay grading downward to clayey sand.

4.2 ANALYTICAL RESULTS

4.2.1 CAM Inorganics

The results for the chemical analyses for CAM inorganics (metals) are shown on Table 1. The DHS considers any waste which contains a substance listed in Table 1 to be a hazardous waste if: (1) the total concentration of any listed inorganic compound exceeds the Total Threshold Limit Concentration (TTL) for that compound; or, (2) the extractable concentration (in mg/l), as determined by a Waste Extraction Test (WET), of any listed inorganic compound exceeds the respective Soluble Threshold Limit Concentration (STLC) for that compound. It should be noted that the samples were analyzed only for total concentrations; WET tests were not performed. None of the samples analyzed contained inorganic compounds at total concentrations in excess of the respective TTLs. Underlined values in Table 1 represent cases in which the total concentration of a metal exceeds its respective STLC. In these cases, WET tests must be performed and the results compared to listed STLC values in order to assess whether the sample would be considered a hazardous waste.

4.2.2 Priority Pollutant Organic Compounds

The results of the chemical analyses of samples for U.S. EPA priority pollutant organics are summarized in Table 2. Only those compounds which were detected in one or more samples are listed in Table 2; a complete listing of the analytical results is presented in Appendix A. The DHS may determine that a waste is hazardous if it contains any of the priority pollutant organic compounds. The California Administrative Code (Title 22, Division 4, Chapter 30, Article 9, Section 66680) states that a waste that "...contains a material cited in the List of Chemical Names or the List of Common Names presented in this Article shall be considered a hazardous waste...". Compounds that have been detected in the samples (Table 2) and that appear on the List of Chemical Names include benzene, trans-1,2 dichloroethene, ethylbenzene, methylene chloride, toluene, trichloroethene, and naphthalene.

TABLE 1

SUMMARY OF ANALYTICAL RESULTS FOR CAM* INORGANIC COMPOUNDS (METALS)¹
(Results in mg/kg)

Element	Total Threshold Limit Concentration (mg/kg net wt.)	Soluble Threshold Limit Concentration (mg/l leachate)	DMEB-1 Sample 3	DMEB-1 Composite	DMEB-2 Composite	DMEB-2 Sample 6	DMEB-3 Sample 9	DMEB-3 Sample 10	DMEB-4 Sample 2
Arsenic	500	5	<5	<5	<5	<5	<u>30</u>	<5	<5
Antimony	500	15	<5	<5	<5	<5	<5	<5	<5
Barium	10,000	100	80	<u>310</u>	<u>930</u>	<u>120</u>	53	95	<u>320</u>
Beryllium	75	0.75	<0.5	<0.5	<0.5	0.65	<0.5	<0.5	<0.5
Cadmium	100	1	<u>2.5</u>	<u>2.6</u>	<u>1.9</u>	<u>2.0</u>	0.5	<u>1.6</u>	<u>1.9</u>
Chromium III/IV ²	2500/500	560/5	21	310	24	30	7.1	18	27
Cobalt	8000	80	4.6	5.0	3.9	12	3.6	7.6	9.2
Copper	2500	25	<u>44</u>	<u>57</u>	<u>28</u>	<u>28</u>	9.4	17	<u>34</u>
Lead	1000	5	<u>130</u>	<u>250</u>	<u>280</u>	<5	<5	<5	<u>17</u>
Mercury	20	0.2	<u>0.25</u>	0.19	<u>0.22</u>	0.1	<0.1	<0.1	<0.1
Molybdenum	3500	350	<10	<10	<10	<10	<10	<10	<10
Nickel	2000	20	17	<u>38</u>	<u>27</u>	<u>22</u>	6.6	14	<u>23</u>
Selenium	100	1	<1	<1	<1	<1	<1	<1	<1
Silver	500	5	<u>500</u>	<2	<2	<2	<2	<2	<2
Thallium	700	7	<5	<5	<u>30</u>	<5	<5	<5	<5
Vanadium	2400	24	22	<u>45</u>	24	<u>49</u>	14	<u>32</u>	<u>32</u>
Zinc	5000	250	150	<u>2300</u>	130	57	22	42	220

¹ Samples were analyzed only for total concentration of metals; underlined values signify that total concentration found exceeds the Soluble Threshold Limit Concentrations.

² Reported as Cr III plus Cr IV.

* CAM: California Assessment Manual, California Department of Health Services

TABLE 2

SUMMARY OF ANALYTICAL RESULTS FOR IDENTIFIED PRIORITY POLLUTANTS¹
(EPA METHODS 624 and 625)¹
(micrograms/kilogram)

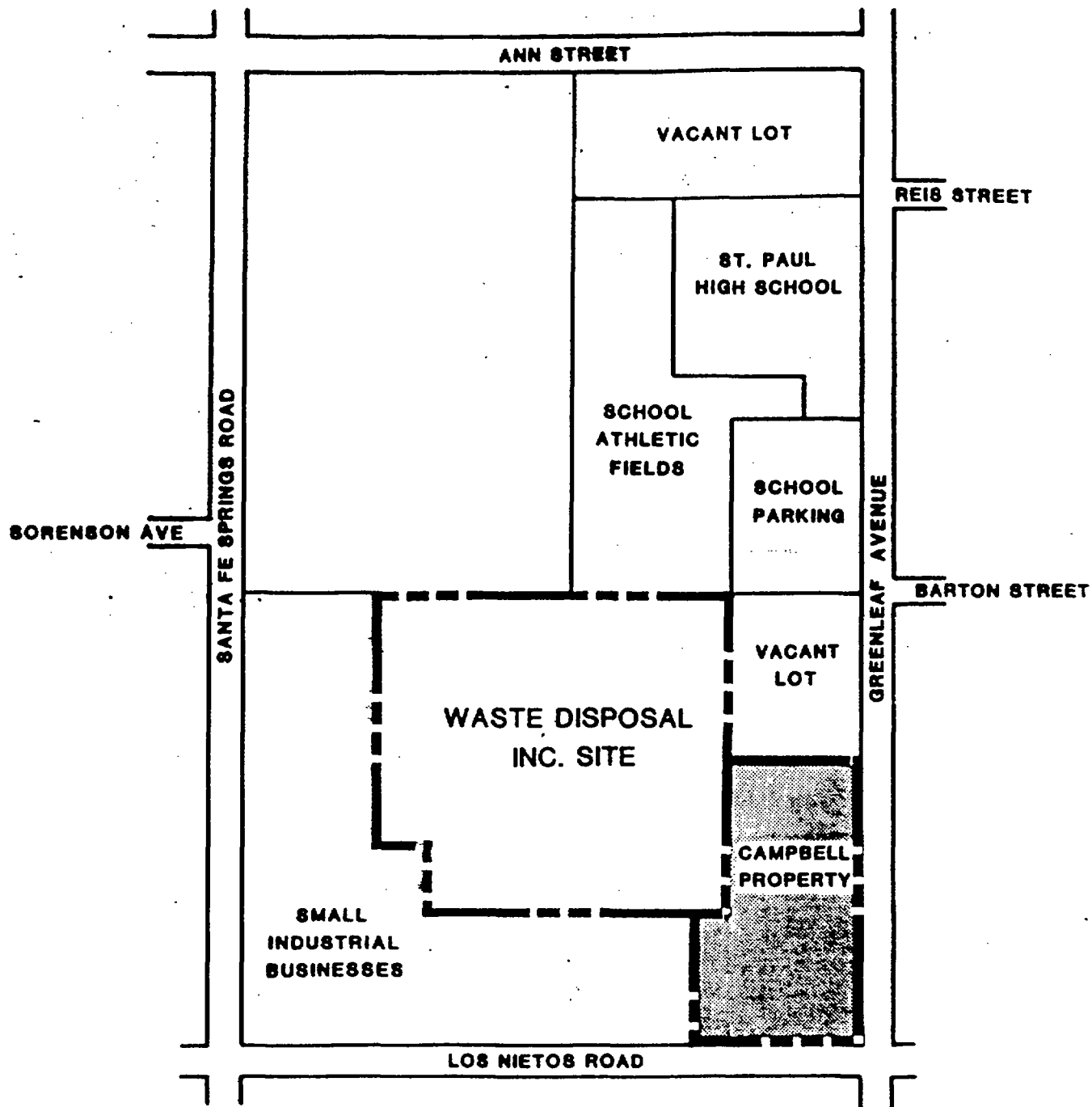
Identified Priority Pollutant	DMEB-1 Sample 3	DMEB-1 Composite	DMEB-2 Composite	DMEB-2 Sample 6	DMEB-3 Samples 9 and 10	DMEB-4 Sample 2
<u>Volatiles (EPA Method 624)</u>						
4V benzene	ND	5100	ND	ND	ND	ND
30V trans-1, 2, dichloroethene	ND	1100	ND	ND	ND	ND
38V ethylbenzene	1800	25000	1900	ND	ND	ND
44V methylene chloride	ND	7000	ND	ND	ND	ND
85V tetrachloroethene	ND	22000	ND	ND	ND	ND
86V toluene	3100	57000	ND	ND	ND	ND
87V trichloroethene	ND	13000	ND	ND	ND	ND
<u>Hazardous Substances² (EPA Method 624)</u>						
CL14 2-butanone	ND	5100	ND	ND	ND	ND
CL20 total xylenes	15000	120000	4800	ND	ND	ND
<u>Base/Neutral Compounds (EPA Method 625)</u>						
39B flouranthene	ND	ND	ND	ND	ND	210
55B naphthalene	29000	66000	13000	ND	ND	ND
72B benzo (a) anthracene	ND	ND	ND	ND	ND	380
73B benzo (a) pyrene	ND	ND	ND	ND	ND	1100
75B benzo (k) flouranthene	ND	ND	ND	ND	ND	1500
76B chrysene	ND	ND	ND	ND	ND	460
79B benzo (phi) perylene	ND	ND	ND	ND	ND	200
81B phenanthrene	24000	30000	ND	ND	ND	ND
83B indeno (1,2,3-cd) pyrene	ND	ND	ND	ND	ND	300
84B pyrene	ND	ND	ND	ND	ND	160

¹ Results are given only for those compounds which were detected in one or more samples; detection limits vary as shown in Appendix.

² Butanone and xylenes are non-priority pollutants.

ND: Not detected (see Appendix for detection limits)

3) 5/10/86



0 400 FEET
SCALE

FIGURE 1

SITE LOCATION MAP

Dames & Moore

with dry ice. Chain of custody records were completed in the field and transferred with the samples via overnight courier to the analytical laboratory.

The borings were completed to depths ranging from 16.5 to 21.5 feet. The borings were not drilled deeper to avoid contamination of deeper zones. A Dames & Moore geologist was present at all times to: (1) supervise the drilling subcontractor; (2) collect soil samples; (3) make a geologic log of material penetrated; and, (4) test the soil samples for organic vapor emissions using the Organic Vapor Analyzer.

3.4 ANALYTICAL TESTING PROGRAM

Five selected soil samples were analyzed by California Analytical Laboratories in Sacramento, California for CAM metals, U.S. EPA priority pollutant organics, and pH. All analyses were performed according to procedures specified by the California Department of Health Services (CAM TTLC Metals) and the U.S. EPA (methods 8240 and 8270 for volatile and semi-volatile priority pollutants, respectively). The detection limits for priority pollutants vary considerably between samples (Appendix A) because of variation in the total organic contents of each particular sample. Samples containing relatively high levels of organics must be diluted in order to achieve adequate resolution of component organic species in the sample. This dilution factor results in an increase of detection limits for that particular sample.

The complete analytical results are contained in Appendix A. Samples with detectable concentrations of priority pollutants are summarized in Tables 1a and 1b.

4.0 INVESTIGATIVE RESULTS

4.1 SOIL SAMPLING RESULTS

A total of 39 soil samples were collected for analysis from the six borings. In general the samples consisted of hard silty clays and silty sands with occasional asphalt, pebbles, and sand lenses. In soil borings DM-1, DM-2 and DM-3, a grey-green clayey material was encountered from approximately 5 to 15 feet below ground surface. This material is probably drilling mud known to have been placed in sumps at the site.

Organic vapor concentrations within soil samples varied widely within and between borings, ranging from 3 ppm to greater than 1000 ppm. Borings DM-1, DM-2 and DM-3 contained the highest measured organic vapor concentrations. Some of these high readings may be correlative with the presence of drilling mud. Boring DM-2 contained the highest organic vapor measurements; all soil samples with the exception of the surface sample exceeded 1000 ppm on the OVA.

4.2 ANALYTICAL RESULTS

The results of the soil sample analyses are summarized in Tables 1a and 1b. Only compounds that were present in concentrations greater than the detection limit in at least one sample are shown on the tables.

Soils tested by EPA Method 8240 generally did not have detectable concentrations of priority or non-priority volatile pollutants. Detectable levels of toluene were found in Boring DM-1 at 6.0 feet. Higher levels of ethylbenzene were found in Boring DM-2 at a depth of 8.5 feet.

Soil samples collected from Borings DM-1 through DM-4 tested by EPA Method 8270 generally had detectable concentrations of one or more priority or non-priority semi-volatile pollutants. Detectable to moderate levels of naphthalene, di-n-butyl phthalate and 2-methylnaphthalene were found in DM-1 at a depth of 6.0 feet. Boring DM-2 contained high concentrations of naphthalene, fluorene, phenanthrene, and 2-methylnaphthalene at a depth of 8.5 feet. At a depth of 11 feet in boring DM-2, naphthalene, isophorone, di-n-butyl phthalate, chrysene, fluorene, phenanthrene, and 2-methylnaphthalene were also present. Boring DM-3 contained relatively high concentrations of naphthalene, fluorene, phenanthrene, and 2-methylnaphthalene at a depth of 16 feet.

Detectable concentrations of di-n-butyl phthalate were found at a depth of 3.5 feet in Boring DM-4.

Soils tested for CAM metals all showed concentrations below the Total Threshold Limit Concentration (TTL) Regulatory Values by at least two orders of magnitude. However, in three cases metals were detected at total

concentrations exceeding ten times the Soluble Threshold Limit Concentration (STLC) values. In such cases, Waste Extraction Tests (WETs) are necessary to determine if the samples have hazardous concentrations of soluble metals.

California Analytical Laboratories tested six sampled from five of the borings for pH (Appendix B). All of the soil samples yielded pH values between 7.9 and 8.4. Results are tabulated in Table 2.

4.3 VAPOR PROBE RESULTS

Four localities (Figure 2) were monitored for hydrocarbon soil gas using a Century System model 128 OVA calibrated to methane and a Gas Tech model NP204 Natural Gas Indicator (NGI). Results of this testing area tabulated in Table 2. Vapor probe locations VP-1, VP-3 and VP-4 showed high gas concentrations on the NGI on the order of 4,000 to 20,000 ppm. Concentrations on the OVA in these probes exceeded 1,000 ppm. Vapor probe VP-2 yielded only 20 ppm on the OVA. It appears that the vapor probes with high readings on both the OVA and NGI are associated with areas underlain by soils which contain priority pollutants (Borings DM-1, DM-2, DM-3, and DM-4).

(what about VP-1) ?

TABLE 1a

EPA METHOD 8240 RESULTS
(VOLATILE PRIORITY AND NON-PRIORITY POLLUTANTS)
CONCENTRATIONS GIVEN IN ug/kg (ppb)

BORING	DM-1	DM-2
Depth (feet)	6.0	8.5
Toluene	250	ND
Ethylbenzene	ND	7300

Note: All samples not listed did not contain detectable concentrations of EPA Method 8240 compounds. Compounds not listed were not detected in the samples which were analyzed.
ND: Not Detected.

TABLE 1b

EPA METHOD 8270 RESULTS
(SEMI-VOLATILE PRIORITY AND NON-PRIORITY POLLUTANTS)
CONCENTRATIONS GIVEN IN ug/kg (ppb)

BORING	DM-1	DM-2	DM-2	DM-3	DM-4
Depth (feet)	6.0	8.5	11.0	16.0	3.5
Naphthalene	201	21,000	16,000	40,000	ND
Di-n-butyl phthalate	2300	ND	1,300	ND	390
Fluorene	ND	35,000	5,200	12,000	ND
Phenanthrene	ND	48,000	6,700	15,000	ND
Isophorone	ND	ND	4,700	ND	ND
Chrysene	ND	ND	2,200	ND	ND
2-methyl- naphthalene	140	430,000	48,000	78,000	ND

Note: Samples not listed did not contain detectable concentrations of EPA Method 8270 compounds. Compounds not listed were not detected in the samples which were analyzed.
ND: Not Detected (see Appendix A for detection limits)

TABLE 2

SOIL pH RESULTS

<u>Boring</u>	<u>Depth (feet)</u>	<u>pH</u>
DM-1	6.0	8.4
DM-2	8.5	8.1
DM-2	11.0	7.9
DM-3	16.0	8.2
DM-4	3.5	7.9
DM-5	8.5	8.3

TABLE 3

VAPOR PROBE RESULTS

<u>Probe Location</u>	<u>Depth (feet)</u>	<u>OVA (ppm)</u>	<u>NGI (%)</u>	<u>NGI (ppm)</u>
VP-1	6.0	>1000	0.6	6000
VP-2	6.0	20	1.5	15000
VP-3	6.0	>1000	2.0	20000
VP-4	6.0	>1000	0.4	4000

(4) 1/15/88

JOHN L. HUNTER & ASSOCIATES, INC.

Industrial & Hazardous Waste Management

January 15, 1988

L.A. County Department of Health Services
2615 S. Grand Ave., 6th Floor Rm 607
Los Angeles, CA 90007

Mr. Richard Gillaspy

**Subject: Soil Sampling At The Campbell Property
Corner of Greenleaf Ave. and Los Nietos Rd., Santa Fe Springs**

This report contains the results of surface sampling conducted following the unauthorized discharge of plating solutions to the ground from 9925 1/2 Greenleaf Ave., Santa Fe Springs. As this site is adjacent to, and may soon be included in, a superfund site, no suggested mitigation or remedial measures are included.

SAMPLING:

As specified by Mr. Gillaspy, samples were taken at the bottom of two pits and in an area west of the quonset hut at 9925 Greenleaf Ave. (see map 1). In addition to these three, the sewer lateral from the industrial waste interceptor for the plating shop was found to be broken and a sample was taken just below the break.

The samples were taken on December 8, 1987, and delivered immediately to West Coast Analytical Services for analysis. As is standard practice, the samples were packed in ice immediately after being taken.

Sample 1:

A composite grab sample of three locations west of the 9925 Greenleaf Building in an area discolored from the discharge. Asphalt paving was found approximately two inches below the surface at all three of the composite locations. The samples were taken in a glass jar.

Sample 2:

This sample was obtained using a hand auger at approximately six inches below the bottom of a three foot deep pit located near the southwest corner of the 9925 1/2 Greenleaf building.

Sample 3:

This sample was obtained using a hand auger at approximately six inches below the bottom of a one foot deep pit located just to the north of the pit where sample number 2 was obtained.

Sample 4:

This sample was taken at a depth of one foot using a hand auger approximately two feet downstream of the industrial waste interceptor for the 9925 1/2 Greenleaf building. This was directly under a break in the sewer lateral.

RESULTS & CONCLUSIONS:

The test results are attached. The pH levels found were not excessive in either the acid or alkaline directions. The nitrate levels in sample one was very high relative to the other samples. Elevated levels of metals (Nickel, Copper, Zinc and lead) were found. Antimony, Cadmium and Chrome also showed elevated levels in some samples relative to others.

If you have any questions, please feel free to contact me at this office.

Sincerely,



John L. Hunter
President

NORTH

approximate scale

1" = 40'

11
ELAM
MULD
12809
LOS NIETOS

6
MURRAY
9927
2
POLLARD
9927 1/4
13
OUT-LAW
9927 1/2
13
OUT-LAW
9927 3/4
14
CENTNER
9929
15
SPROWLS
9929 1/4

22
MERSON REFRIG
12829 LOS NIETOS
23
RIC DETAIL
12831 LOS NIETOS
23
RIC DETAIL
12833 LOS NIETOS
24
VACA
12835 LOS NIETOS

1
WHITTIER
GRINDING
9847
GREENLEAF
2
LEDON
MACHINE
9949
GREENLEAF

DRIVEWAY A

11
ELAM MOLD
9921 1/2
6
MURRAY
9921
8
WAHLIN
9919 1/2
6
MURRAY
9919
9
CARREON
9917 1/2
8
FRAMES
9917

3
GOREN
9905
4
LOREST
9907
5
MOOSE
9909
9
CARREON
9911
9
CARREON
9913
7
RAMERIZ
9915

Sample 1
composite locations

Sample 4

Sample 3

Sample 2

CARREON
9925
9
CARREON
9923
9
CARREON
9925 1/2

16
HUSBAND
9931
17
FAB RITE
9933

19
DURANGO ORNAMENTAL
9945
18
MARKE
CABINET
9941
3
GOREN
9943
20
JON DEE
9947
21
T.L. TELLEZ
9951

GREENLEAF AVENUE

LOS NIETOS ROAD

MAP 1 - QUONSET HUTS
SITE LAYOUT AND SAMPLING LOCATIONS

December 15, 1987

JOHN L. HUNTER & ASSOCIATES
877 Rose Place
Anaheim, CA 92805

Attn: John Hunter

JOB NO. 7983

WCAS

**WEST COAST
ANALYTICAL
SERVICE, INC.**

ANALYTICAL CHEMISTS

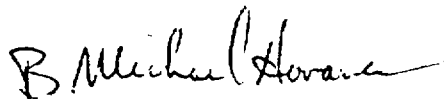
LABORATORY REPORT

Samples Received: Four (4) soil samples
Date Received: 12-8-87
Purchase Order No: Santa Fe Springs

The samples were analyzed as follows:

<u>Samples Analyzed</u>	<u>Analysis</u>	<u>Results</u>
Four soils	Priority Pollutant Metals by ICPMS	Quant. Report
Four soils	Nitrate by EPA 300.6	Table I
Four soils	pH by EPA 9040	Table II

Page 1 of 2



B. Michael Hovanec
Senior Staff Chemist



D.J. Northington, Ph.D.
Technical Director

Client: John L. Hunter & Assoc.
Job Number: 7983
Date Analyzed: 12-09-87

Quantitative Analysis Report
Inductively Coupled Plasma-Mass Spectrometry

Parts Per Million (mg/Kg)
Soil Sample

	Campbell #1	Campbell #2	Campbell #3	Campbell #4	Blank DL
Beryllium	0.29	0.69	0.52	0.49	0.02
Chromium	459	30	26	89	0.8
Nickel	2340	78	18	48	0.2
Copper	1300	43	28	350	0.6
Zinc	2560	1200	574	4920	1
Arsenic	7	4	3.1	4.1	0.9
Selenium	ND<3	ND<3	ND<3	ND<3	3
Silver	0.44	0.1	0.25	1	0.02
Cadmium	12	2.9	1.3	7.9	0.03
Antimony	6.1	0.78	0.87	1.1	0.03
Mercury	0.1	ND<0.08	ND<0.08	ND<0.08	0.08
Thallium	0.09	0.13	0.15	0.12	0.02
Lead	654	7.5	399	71	0.08

ND-Not Detected. The detection limit (DL) is stated above.
Because of sample interferences, Sample DLs may differ from Blank DLs.

WEST COAST ANALYTICAL SERVICE, INC.

John L. Hunter & Associates
Mr. John Hunter

Job # 7983
Dec. 15, 1987

LABORATORY REPORT

TABLE I

Parts Per Million (ug/g)

<u>Sample No.</u>	<u>Nitrate (NO₃⁻)</u>
Campbell 1	3990
Campbell 2	ND
Campbell 3	26
Campbell 4	9
Detection Limit	1

Date Analyzed: 12-11-87

ND - Not Detected

TABLE II

<u>Sample No.</u>	<u>pH (units)</u>
Campbell 1	7.2
Campbell 2	5.6
Campbell 3	7.2
Campbell 4	7.9

Date Analyzed: 12-9-87